IN THE CLAIMS

1. (Currently Amended) A method of managing network elements in a communications network

comprising:

> establishing a hierarchy of geographical areas in the communication network, where an

area at a higher level of the hierarchy includes a plurality of areas at a lower level of the

hierarchy;

> representing each network element in a geographical area at a first level in the

geographical hierarchy on a graphical user interface; and

> summarizing the representation of network elements at a second level in the

geographical hierarchy, higher than the first level of the geographical hierarchy.

2. (Previously presented) The method of claim 1 in which the establishment of the hierarchy of

geographical areas includes establishing *n* levels of geographical areas in the network, where

each nth level geographical area includes a plurality of *(n-1)*th level geographical areas, and in

which summarizing the representation of network elements includes summarizing the

representation of network elements at *(n-1)* levels of geographical areas.

3. (Previously presented) The method of claim 1 wherein the management of the communication

network includes monitoring a condition of the network elements, in which the representation of

network elements in the geographical area includes representing the condition of the network

elements, and in which summarizing the representation of network elements at the second level

in the geographical hierarchy includes triggering an alarm at the second level in response to a

condition of a particular network element represented at the first level.

4. (Previously presented) The method of claim 3 wherein the communication network is

managed in real-time, and further comprising, following the representing of each network

element in the geographical area:

    updating the condition of one or more network elements represented in the first level of

the geographical hierarchy; and

    wherein summarizing the representation of network elements at the higher level in the

geographical hierarchy includes triggering the alarm at the second hierarchical level in response

to changes in the condition of network elements.

5. (Previously presented) The method of claim 1 in which representing each network element in

a geographical area at a first level in the geographical hierarchy includes representing at least one

network element as a first icon on a map of geographical areas on the first level of the

geographical hierarchy.

6. (Previously presented) The method of claim 1 in which representing each network element in

a geographical area at a first level in the geographical hierarchy includes representing a

condition of at least one network element with a first icon that varies with respect to the status

of the network element.

7. (Previously presented) The method of claim 1 in which summarizing the representation of

network elements at the second level in the geographical hierarchy includes representing a

status of a plurality of the network elements as an icon on a map of geographical areas on the

second level of the geographical hierarchy.

8. (Previously presented) The method of claim 7 further comprising, preceding the summarizing the representation of network elements at the higher level in the geographical hierarchy:

      establishing a set of rules defining the meaning of the icon.

9. (Previously presented) The method of claim 7 in which summarizing the representation of network elements at the second level in the geographical hierarchy includes coloration of the icon.

10. (Previously presented) The method of claim 1 in which summarizing the representation of network elements at the level in the geographical hierarchy includes summarizing a status of a plurality of the network elements with textual annotation.

11. (Previously presented) The method of claim 1 wherein management of the network includes installation of network elements into the communications network, and in which representing each network element in a geographical area at a first level in the geographical hierarchy includes entering a latitude and a longitude of the network element upon installation into the network.

12. (Original) The method of claim 8 wherein network management is supervised, and further comprising:

      creating supervisor identities; and

in which the establishment of rule-sets includes establishing a set of rules for each

supervisor identity.

13. (Previously presented) The method of claim 8 in which the establishment of rule-sets

includes defining a set of rules responsive to conditions selected from a group consisting of

power source status, software corruption, hardware failure, environmental factors, and intrusion

into the network elements.

14. (Previously presented) The method of claim 1 wherein the communications network is a

fixed wireless service (FWS) including base stations and remote units, and in which representing

each network element in a geographical area at a first level in the geographical hierarchy

includes representing geographical positions of network base stations and remote units.

15. (Currently Amended) A method of determining the failure of a network element in a

communications network comprising:

representing the communications network as a hierarchy of geographical areas on a

graphical user interface, where an area at a higher level of the hierarchy of geographical areas

includes a plurality of areas at a lower level of the hierarchy of geographical areas;

detecting a failure of one or more network elements;

sending an alarm to the higher level in the geographical hierarchy summarizing the

failure of the one or more network elements; and

in response to the alarm, identifying and locating failed network elements at a lower

level of the geographical hierarchy.

16. (Previously presented) The method of claim 15 in which representing the communications

network as a hierarchy of geographical areas includes representing the communications network

as a hierarchical arrangement of geographical maps where a map at the higher level of the

hierarchy of geographical areas includes a plurality of maps from the lower level of the hierarchy

of geographical areas.

17. (Previously presented) The method of claim 15 in which the sending of the alarm to the

higher level in the geographical hierarchy summarizing network element failures includes

defining an alarm trigger that is responsive to the network element failures.

18. (Currently Amended) A method for determining the failure of a network element in a

communications network comprising:

      monitoring a geographical map <u>on a graphical user interface </u>which summarizes the status

of a plurality of network elements in the communications network;

      on a map display, receiving an alarm representing the failure of network elements; and

      in response to the alarm, narrowing the scale of the map to geographically locate failed

network elements.

19. (Previously presented) A system for presenting a communications network comprising:

      a database including geographical locations of network elements;

      an application coupled to said database to represent the communications network using a

hierarchical arrangement of geographic areas, where each network element is located at a lower

level in the hierarchy of geographical areas, said application summarizing the representation of

the plurality of network elements at a higher level in the hierarchy of geographical areas;

a display having an input connected to said application to present a modifiable display of

network elements as represented in multiple levels in the hierarchy of geographical areas; and

a supervisor interface connected to said application, said supervisor interface providing

commands to said application to modify said display.

20. (Original) The system of claim 19 wherein the communications network is a fixed wireless

system (FWS); and in which the network elements are base stations and remote units.

21. (Original) The system of claim 20 in which said base stations and remote units have an

operational and a non-operational status;

in which said database is updated on the status of each said base station and remote unit;

in which said application summarizes the status of said base stations and remote units at

the higher hierarchical level; and

in which said display presents said application summaries.